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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/432,824	11/02/1999	ROGER PHILLIP QUAYLE	A-68101/JGW	1614

22242 7590 06/16/2004

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CHICAGO, IL 60603-3406

EXAMINER
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PAN, YUWEN

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 06/16/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/432,824

Applicant(s)

QUAYLE ET AL.

Examiner

Yuwen Pan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 11 and 13-21 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-10 is/are allowed.
- 6) ☒ Claim(s) 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. Applicant's arguments filed 4/20/04 have been fully considered but they are not persuasive.

The applicant argues that Widegren reference doesn't teach one limitation of increasing symbol periods and reducing the corruption of data by delay spread. The examiner respectfully disagrees because first of all, increasing symbol periods is the cause of reducing the corruption of data by delay spread in which due to multipath propagation. Furthermore, the applicant explained that "[w]hen using lower data rate, the symbol period of each bit (i.e., time to transmit or receive one bit) is increased, allowing for a greater delay spread, and therefore a greater distance, before the bits delayed by multipath arrive during the symbol periods of later bits causing corruption data." Widegren teaches that in order to maintain the channel quality that accompanies the radio access request, one feature is to select a suitable CDMA(s) code and bit rate(s) in which is inversely proportional to the symbol period (see column 6 and lines 18-21). Thus, Widegren teaches not only that adjust bit rates to either increasing or decreasing the symbol period but also use different codes for various radio access bearers.

In the light of foregoing, the previous rejection sustains.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Widegren et al (US006374112B1).

Widegren discloses a method of operating a cellular wireless Internet access system (see figure 1, items 14, 20, 24 and 30) where a plurality of base stations are each related to a cell and are located at a low to ground level, along with a plurality of subscriber terminals in each cell to provide a relative low level of interference to adjacent systems partially due to attenuation by foliage, building cluster, and terrain losses, but where such factors causing attenuation also causes a time delay spread of the signal due to multipath signals (see column 2, line 39-44, column 4 and lines 26-50), the method comprising the steps of:

Transmitting simultaneously on the same radio frequency channel a combined stream of data on a plurality of data bearer sub-channels, each subchannel using a different spreading code (see column 3 and lines 41-42) and having a data rate which is a fraction of the combined stream of data, whereby said reduced data rates increased symbol periods and thereby reduce corruption of data due to said delay spread and where such subchannels are combined using multiplexing techniques (see column 6 and lines 15-21).

Widegren doesn't disclose that subchannels are de-combined using inverse multiplexing techniques. However, it is inherent for any CDMA system to utilize inverse multiplexing techniques to de-combined at least one subchannels from received band.

***Allowable Subject Matter***

3. Claims 6-10 are allowed.

With respect to claim 6, the prior arts of record do not disclose a cellular wireless internet access system with the combination of features such as a small frequency allocation obtainable

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anywhere within the designated frequency band using a single frequency channel of varying bandwidth 6 and 24MHz using different spread spectrum transmission chip rates and providing high net data rates of 1.5-3.0 Mbps using a plurality of data bearer subchannels on a said single frequency channel, orthogonal downlink spreading codes for CDMA transmission, and successive interference cancellation or simultaneous uplink spreading codes.

*Conclusion*

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuwen Pan whose telephone number is 703-305-7372. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yuwen Pan  
June 10, 2004

  
**VIVIAN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**

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